

## **AMENDMENTS TO THE CLAIMS**

This listing of claims replaces all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

1. (Currently Amended) A computer system for building large indexes comprising:  
an index engine operably configured for coupling with an indexer plug-in; and  
an indexer plug-in having an index merger for concurrently indexing content in a plurality of sub-indexes and merging at least some of the sub-indexes that are created at a plurality of stages during indexing of the content, wherein the plurality of stages includes at least a first stage where a first set of sub-indexes are merged into new sub-indexes and at least a second stage where a plurality of new sub-indexes are merged into a master index.
2. (Original) The system of claim 1 further comprising a gatherer engine operably coupled to the index engine for providing content to the index engine for indexing.
3. (Original) The system of claim 2 wherein the gatherer engine comprises a gatherer plug-in for selecting content for indexing.
4. (Original) The system of claim 2 wherein the gatherer engine comprises a content filter for extracting elements from content for indexing.
5. (Original) The system of claim 1 wherein the indexer comprises a content filter for extracting elements from content for indexing.
6. (Original) The system of claim 1 wherein the content comprises at least one member of the set comprising documents, images, audio streams and video streams.
7. (Original) The system of claim 1 further comprising a master index resulting from merging all of the sub-indexes created during indexing of content.

8. (Original) The system of claim 7 wherein the content index comprises a dictionary.

9. (Original) A computer readable medium having compute-executable components comprising the system of claim 1.

10. (Currently Amended) A method for building a large index in a computer system, comprising the steps of:

determining ~~the~~ a number of stages for merging sub-indexes;  
determining ~~the~~ a maximum number of sub-indexes for each stage;  
building a sub-index in volatile memory;  
storing the sub-index in persistent storage as belonging to one of the stages; and  
merging the stored sub-index with at least one other sub-indexes into a new sub-index at a stage before the a total number of sub-indexes within a particular at that stage exceeds the maximum number of sub-indexes determined for that particular stage; and  
subsequently merging the new sub-index with at least one additional sub-index in a new stage upon determining that a predetermined number of new sub-indexes exist in the new stage and while simultaneously indexing content into at least one sub-index within said particular stage.

11. (Currently Amended) The method of claim 10 further comprising the step of determining to merge sub-indexes at a certain stage that has half of the maximum number of sub-indexes ~~determined for that stage.~~

12. (Currently Amended) The ~~system~~ method of claim 10 further comprising the step of merging all sub-indexes to create a master index.

13. (Original) The method of claim 10 wherein the step of merging sub-indexes at a stage comprises storing the merged sub-index at the next stage.

14. (Original) The method of claim 10 wherein the step of determining the number of stages for merging sub-indexes comprises calculating the sum of half the number of sub-indexes at each stage and the product of the number of stages and the number of sub-indexes at each stage.

15. (Original) The method of claim 14 wherein the sum calculated is not greater than the number of persisted sub-indexes allowed for building the large index in the computer system.

16. (Original) The method of claim 10 wherein the step of determining the number of sub-indexes for each stage comprises calculating the sum of half the number of sub-indexes at each stage and the product of the number of stages and the number of sub-indexes at each stage.

17. (Original) The method of claim 16 wherein the sum calculated is not greater than the number of persisted sub-indexes allowed for building the large index in the computer system.

18. (Original) The method of claim 10 wherein the step of determining the number of stages for merging sub-indexes comprises calculating the product of the number of items for which index information may fit into an index in volatile memory and the quantity of half the number of sub-indexes at each stage raised to the power of one plus the number of stages for merging sub-indexes.

19. (Original) The method of claim 18 wherein the product calculated is not greater than the number of items to be indexed in the large index of the computer system.

20. (Original) The method of claim 10 wherein the step of determining the number of sub-indexes for each stage comprises calculating the product of the number of items for which index information may fit into an index in volatile memory and the quantity of half the number of sub-indexes at each stage raised to the power of one plus the number of stages for merging sub-indexes.

21. (Original) The method of claim 20 wherein the product calculated is not greater than the number of items to be indexed in the large index of the computer system.

22. (Currently Amended) The ~~system~~-method of claim 10 wherein the step of merging ~~sub-indexes at each stage~~ comprises merging sub-indexes ~~at each stage~~ while continuing to index content.

23. (Currently Amended) The ~~system~~-method of claim 10 wherein the step of merging sub-indexes at each stage comprises merging a copy of the sub-indexes for at least one stage.

24. (Currently Amended) The ~~system~~-method of claim 10 wherein the step of storing the sub-index in persistent storage comprises storing the sub-index in persistent storage as belonging to a first stage.

25. (Currently Amended) The ~~system~~-method of claim 10 further comprising the step of gathering content from the World Wide Web for indexing.

26. (Currently Amended) The ~~system~~-method of claim 25 wherein the step of gathering content comprises gathering at least one member of the set comprising documents, images, audio streams and video streams.

27. (Currently Amended) The ~~system~~-method of claim 10 wherein the step of merging sub-indexes at each stage comprises concurrently merging sub-indexes at different stages.

28. (Currently Amended) The ~~system~~-method of claim 27 wherein the step of concurrently merging sub-indexes at different stages comprises using multiple processors.

29. (Currently Amended) The ~~system~~-method of claim 10 wherein the step of building a sub-index comprises filtering information from an item being indexed.

30. (Currently Amended) The ~~system~~method of claim 29 wherein the step of filtering information comprises using a different filter for each different type of content.

31. (Currently Amended) A computer readable storage medium having computer-executable instructions stored thereon for performing the method of claim 10.



32. (Currently Amended) A computer system for building a large index, comprising:

means for creating sub-indexes at different stages of a processing pipeline;

means for concurrently merging particular sub-indexes at different stages of the processing pipeline; and

means for continuously indexing content into other sub-indexes at the different stages of the processing pipeline while simultaneously merging the particular sub-indexes.

33. (Original) The system of claim 32 further comprising means for creating a master index after content has been indexed.

34. (Original) The system of claim 32 further comprising means for gathering content to index.

35. (Original) The system of claim 32 further comprising means for selecting content to index.

36. (Original) The system of claim 32 further comprising means for filtering information from content to build a sub-index.

37. (Original) The system of claim 32 wherein means for creating sub-indexes at different stages of a processing pipeline comprises means for determining the number of different stages of the processing pipeline.

38. (Original) The system of claim 32 wherein means for creating sub-indexes at different stages of a processing pipeline comprises means for determining the number of sub-indexes for each stage of the processing pipeline.

39. (Original) The system of claim 32 wherein means for concurrently merging sub-indexes at different stages of the processing pipeline comprises means for determining when to merge sub-indexes at different stages of the processing pipeline.

40. (Original) The system of claim 32 wherein means for continuously indexing content while merging the sub-indexes comprises means for adding new indexing information to sub- indexes at different stages of the processing pipeline while sub-indexes are being merged.

41. (New) A method for building a large index in a computer system, comprising the steps of:

determining the number of stages for merging sub-indexes by at least calculating the sum of half the number of sub-indexes at each stage and the product of the number of stages and the number of sub-indexes at each stage;

determining the number of sub-indexes for each stage;

building a sub-index in volatile memory;

storing the sub-index in persistent storage as belonging to one of the stages; and

merging sub-indexes at a stage before the number of sub-indexes at that stage exceeds the number of sub-indexes determined for that stage.

42. (New) A method for building a large index in a computer system, comprising the steps of:

determining the number of stages for merging sub-indexes;

determining the number of sub-indexes for each stage by at least calculating the sum of half the number of sub-indexes at each stage and the product of the number of stages and the number of sub-indexes at each stage;

building a sub-index in volatile memory;

storing the sub-index in persistent storage as belonging to one of the stages; and

merging sub-indexes at a stage before the number of sub-indexes at that stage exceeds the number of sub-indexes determined for that stage.